

S37-6 Analytical Chemistry Contributing to Scientific Investigation and Counterterrorism

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Terrorisms and criminal acts threaten life of citizens, and adequate guard, criminal search and court trial by law enforcement organization are indispensable for prevention and deterrence against crimes and disaster minimization, in order to realize safe and secure society. Analytical science has been introduced to the measurement of dangerous materials used in terrorisms and criminal acts, and chemical and physical examination as scientific evidence of crimes and suspects. Following analytical events are conducted as the timeframe: (1) monitoring of dangerous materials before occurrence (crisis management); (2) on-site detection by first responders and emergency analysis by laboratory analytical experts (consequence management); (3) laboratory analysis (incident management); (4) minute forensic investigation (court trial). The measurement technologies and analytical methods differ depending on disaster scale, situation in criminal search and time frame. Monitoring and on-site detection are performed using portable equipment with rapidity and simplicity but not with strict accuracy. Early laboratory analysis is performed using screening methods with rapidity and comprehensiveness. Forensic investigation is performed using high-performance analytical instruments with accuracy and precision. The symposiast introduces analytical measurement technologies used in counterterrorism and scientific search, raising Sarin incident and Wakayama poisoned curry incident.